	Application No.	Applicant(s)
Notice of Allowability	10/634,536	NAIR ET AL.
	Examiner	Art Unit	
	Kamran Afshar, 571-272-7796	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *7/11/2006*.

2. ☒ The allowed claim(s) is/are *2-17,19-24,27,28 and 30*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date _____ .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

DETAILED ACTION

1.   An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Paul M. Vargo, Reg. N.: 29,116 on 7/11/2006.

The application has been amended as follows:

In The Claim(s):

1. (Canceled)

2. (Currently Amended) The wireless device of claim [[1]] 13, wherein the user interface comprises:

  an input device, the input device including at least one of:

    a keypad;

    a touch screen;

    an input port;

    a pointing device; and

    a microphone; and

  an output device, the output device including at least one of:

    video display;

    an output port; and

    a speaker.

3. (Original) The wireless device of claim 2, further comprising at least one graphical user interface (GUI) having a plurality of interactive devices designed to facilitate the user interaction with the wireless device via the input device and the output device.

4. (Currently Amended) The wireless device of claim [[1]] 13, wherein the one or more network interfaces comprises at least one of:

    a WWAN interface and a WLAN interface; and

    a combination WWAN/WLAN interface.

5. (Original) The wireless device of claim 4, wherein the WWAN interface and the combination WWAN/WLAN interface are capable of coupling to at least one of:

 an analog cellular network;

 a digital cellular network;

 a TDMA network;

 a CDMA network;

 a 1xRTT network;

 a GPRS network;

 a GSM network;

 a EDGE network;

 a UMTS network; and

 an iDEN Packet Data network.

6. (Original) The wireless device of claim 4, wherein the WLAN interface and the combination WWAN/WLAN interface are capable of coupling to at least one of:

 an IEEE 802.11 network;

 a HomeRF network;

 a Bluetooth network; and

 a HiperLAN network.

7. (Original) The wireless device of claim 4, wherein at least one of the WWAN interface, the WLAN interface and the combination WWAN/WLAN interface is implemented by hardware.

8. (Original) The wireless device of claim 4, wherein at least one of the WWAN interface, the WLAN interface and the combination WWAN/WLAN interface is implemented by software.

9. (Original) The wireless device of claim 4, wherein at least one of the WWAN interface, the WLAN interface and the combination WWAN/WLAN interface is implemented by both hardware and software.

10. (Currently Amended) The wireless device of claim [[1]] 13, wherein the operating system comprises one of:

 MS-DOS;

 MAC OS;

 WINDOWS;

OS/2;

UNIX;

LINUX;

LINDOWS;

XENIX; and

PALM OS.

11. (Currently Amended) ~~The wireless device of claim 1~~[[,]] A wireless device for seamless roaming among one or more wireless wide area networks (WWANs) and one or more wireless local area networks (WLANs), the wireless device comprising:

a user interface enabling a user to interact with the wireless device;

one or more network interfaces coupled to the wireless device and to the one or more WWANs and the one or more WLANs;

an operating system running on the wireless device;

a connectivity application running on top of the operating system and including:

a user interface software component coupled to the user interface;

a core component coupled to the user software interface component; and

one or more network interface components coupled to the core component; and
a driver layer functioning on top of the operating system and coupled to the one or more network interface components and to the one or more network interfaces wherein the user software interface component includes:

a third-generation subcomponent;

a WLAN user interface subcomponent;

~~a~~ an inter-subcomponent communication module coupled to the third-generation subcomponent and the WLAN user interface subcomponent; and

a core interface subcomponent coupled to the inter-subcomponent communication module.

12. (Currently Amended) The wireless device of claim 11, wherein:

the inter-subcomponent communication module is further coupled to the user software interface component; and

the core interface subcomponent is further coupled to the core component.

13. (Currently Amended) ~~The wireless device of claim 1~~[[,]]A wireless device for seamless roaming among one or more wireless wide area networks (WWANs) and one or more wireless local area networks (WLANs), the wireless device comprising:

a user interface enabling a user to interact with the wireless device;

one or more network interfaces coupled to the wireless device and to the one or more WWANs and the one or more WLANs;

an operating system running on the wireless device;

a connectivity application running on top of the operating system and including:

a user interface software component coupled to the user interface;

a core component coupled to the user interface software component; and

one or more network interface components coupled to the core component; and

a driver layer functioning on top of the operating system and coupled to the one or more network interface components and to the one or more network interfaces wherein the core component comprises an active connection selection subcomponent and a rules engine subcomponent, wherein:

the active connection selection subcomponent implements logic to:

detect an availability for the one or more WWANs and the one or more WLANs via the one or more network interface components;

establish and maintain a connection to a first of the available one or more WWANs and one or more WLANs; and

communicate the availability and a connection status to the user via the user interface software component; and

the rules engine subcomponent implements logic to:

define selection criteria by which the active connection selection subcomponent establishes and maintains the connection to the first of the available one or more WWANs and one or more WLANs.

14. (Original) The wireless device of claim 13, the active connection selection subcomponent further implements logic to automatically switch the connection from the first of the available one or more WWANs and one or more WLANs to a second of the available one or more WWANs and one or more WLANs based on the selection criteria of the rules engine subcomponent.

15. (Original) The wireless device of claim 13, the active connection selection subcomponent further implements logic to switch the connection from the first of the available one or more WWANs and one or more WLANs to a second of the available one or more WWANs and one or more WLANs based on a manual switching selection of the user.

16. (Original) The wireless device of claim 13, wherein the user interface component presents the availability and the connection status to the user via the user interface.

17. (Currently Amended) The wireless device of claim [[1]] 13, further comprising one or more other applications running on top of the operating system and coupled to the one or more WWANs and the one or more WLANs via the connectivity application.

18. (Canceled)

19. (Currently Amended) The method of claim [[25]] 27, wherein the one or more WWANs include at least one of:

      an analog cellular network;

      a digital cellular network;

      a TDMA network;

      a CDMA network;

      a 1xRTT network;

      a GPRS network;

      a GSM network;

      an EDGE network;

      a UMTS network; and

      an iDEN Packet Data network.

20. (Currently Amended) The method of claim [[25]] 27, wherein one or more WLANs include at least one of:

      an IEEE 802.11 network;

      a HomeRF network;

      a Bluetooth network; and

      a HiperLAN network.

21. (Currently Amended) The method of claim [[25]] 27, wherein the steps of detecting, selecting, connecting and maintaining are performed automatically.

22. (Original) The method of claim 21, wherein the rules engine includes one or more service provider rules.

23. (Original) The method of claim 22, wherein the one or more service provider rules include a WLAN preference rule.

24. (Original) The method of claim 21, wherein the step of maintaining includes:

monitoring the selected available network connection to determine a connecting loss;

upon determining the connection loss, repeating the steps of the selecting and

connecting.

25. (Canceled)

26. (Canceled)

27. (Currently Amended) ~~The method according to claim 25~~[[,]] A method for seamless switching

of a wireless device between one or more wireless wide area networks (WWANs) and one or

more wireless local area networks (WLANs), the method comprising the steps of:

a) detecting available networks from the one or more WWANs and the one or more

WLANs;

b) communicating the network availability and a connection status to a user of the

wireless device;

c) selecting one of the available networks for use by the wireless device, the selecting

including:

1) a rule-based process further including:

a) searching a rules engine for an applicable rule defining which of the

available networks to select;

b) applying the applicable rule;

c) connecting the wireless device to the selected available network, or

2) a manual process including:

a) enabling the user to manually switch the wireless device connection

from the selected available network to another available network; and

d) maintaining the wireless device connection wherein step of enabling includes:

detecting an intervention by the user;

determining whether the intervention is a request by the user to switch the wireless

device connection from the selected available network;

if the intervention is the request, disconnecting the network device from the selected

available network and reconnecting the network device to another available network; and

if the intervention is not the request, ending the network device connection.

28. (Currently Amended) A wireless device for seamless roaming among one or more wireless wide area networks (WWANs) and one or more wireless local area networks (WLANs), the wireless device comprising:

a hardware user interface enabling a user to interact with the wireless device;

one or more network interfaces coupled to the wireless device and to the one or more WWANs and the one or more WLANs;

~~a connectivity application running on the wireless device; and~~

~~one or more network interface components coupled to the connectivity application,~~ an operating system running on the wireless device;

a connectivity application running on top of the operating system and including:

a user interface software component coupled to the user interface;

a core component coupled to the user interface software component the core component including a rule evaluating engine and a plurality of predetermined connection rules, at least one of which is user created to specify at least one network connection; and

one or more network interface components coupled to the core component; and

a driver layer functioning on top of the operating system and coupled to the one or more network interface components and to the one or more network interfaces where the connectivity application, responsive to a user instruction, switches from one network to another without first detecting a connection loss.[[.]]

29. (Canceled).

30. (Currently Amended) A wireless device as in claim [[1]] 13 where the connectivity application, responsive to a user's intervention, switches from one network connection to another without first detecting a connection loss.

Allowable Subject Matter

2.   In view of the Amended claims as discussed above in item 1, Claims 2-17,19-24,27,28 and 30 are allowed.

The following is an examiner's statement of reasons for allowance: 2-17,19-24,27,28 and 30.

With respect to claim 11, the prior art of record fails to disclose singly or in combination or render obvious that the wireless device comprising: a user interface enabling a user to interact with the wireless device; one or more network interfaces coupled to the wireless device and to the one or more WWANs

and the one or more WLANs; an operating system running on the wireless device; a connectivity application running on top of the operating system and including: a user interface software component coupled to the user interface; a core component coupled to the user software interface component; and one or more network interface components coupled to the core component; and a driver layer functioning on top of the operating system and coupled to the one or more network interface components and to the one or more network interfaces wherein the user software interface component includes: a third-generation subcomponent; a WLAN user interface subcomponent; an inter-subcomponent communication module coupled to the third-generation subcomponent and the WLAN user interface subcomponent; and a core interface subcomponent coupled to the inter-subcomponent communication module.

With respect to claim 13, the prior art of record fails to disclose singly or in combination or render obvious that the connectivity application running on top of the operating system and including: a user interface software component coupled to the user interface; a core component coupled to the user interface software component; and one or more network interface components coupled to the core component; and a driver layer functioning on top of the operating system and coupled to the one or more network interface components and to the one or more network interfaces wherein the core component comprises an active connection selection subcomponent and a rules engine subcomponent, wherein: the active connection selection subcomponent implements logic to: detect an availability for the one or more WWANs and the one or more WLANs via the one or more network interface components; establish and maintain a connection to a first of the available one or more WWANs and one or more WLANs; and communicate the availability and a connection status to the user via the user interface software component; and the rules engine subcomponent implements logic to: define selection criteria by which the active connection selection subcomponent establishes and maintains the connection to the first of the available one or more WWANs and one or more WLANs.

With respect to claim 27, the prior art of record fails to disclose singly or in combination or render obvious that the method comprising the steps of: a) detecting available networks from the one or more WWANs and the one or more WLANs; b) communicating the network availability and a connection status

to a user of the wireless device; c) selecting one of the available networks for use by the wireless device, the selecting including: 1) a rule-based process further including: a) searching a rules engine for an applicable rule defining which of the available networks to select; b) applying the applicable rule; c) connecting the wireless device to the selected available network, or 2) a manual process including: a) enabling the user to manually switch the wireless device connection from the selected available network to another available network; and d) maintaining the wireless device connection wherein step of enabling includes: detecting an intervention by the user; determining whether the intervention is a request by the user to switch the wireless device connection from the selected available network; if the intervention is the request, disconnecting the network device from the selected available network and reconnecting the network device to another available network; and if the intervention is not the request, ending the network device connection.

With respect to claim 28, the prior art of record fails to disclose singly or in combination or render obvious that the wireless device comprising: a hardware user interface enabling a user to interact with the wireless device; one or more network interfaces coupled to the wireless device and to the one or more WWANs and the one or more WLANs; an operating system running on the wireless device; a connectivity application running on top of the operating system and including: a user interface software component coupled to the user interface; a core component coupled to the user interface software component the core component including a rule evaluating engine and a plurality of predetermined connection rules, at least one of which is user created to specify at least one network connection; and one or more network interface components coupled to the core component; and a driver layer functioning on top of the operating system and coupled to the one or more network interface components and to the one or more network interfaces where the connectivity application, responsive to a user instruction, switches from one network to another without first detecting a connection loss.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3.   The art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Terry (US. Pub. No.: 2004/0077374 A1).

b) Shim (U.S. Pub. No.: 2005/0153698 A1).

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Field, Joseph** can be reached @ (571) 272-4090. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kamran Afshar

JOSEPH FEILD
SUPERVISORY PATENT EXAMINER